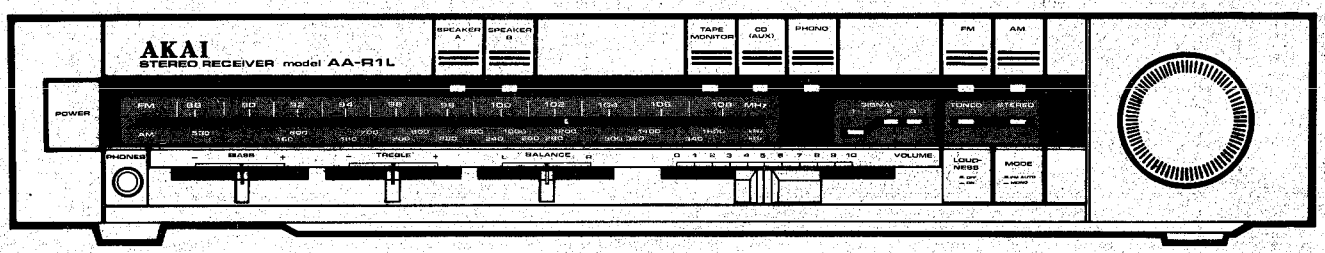
AA-R1/L

AKAI SERVICE MANUAL

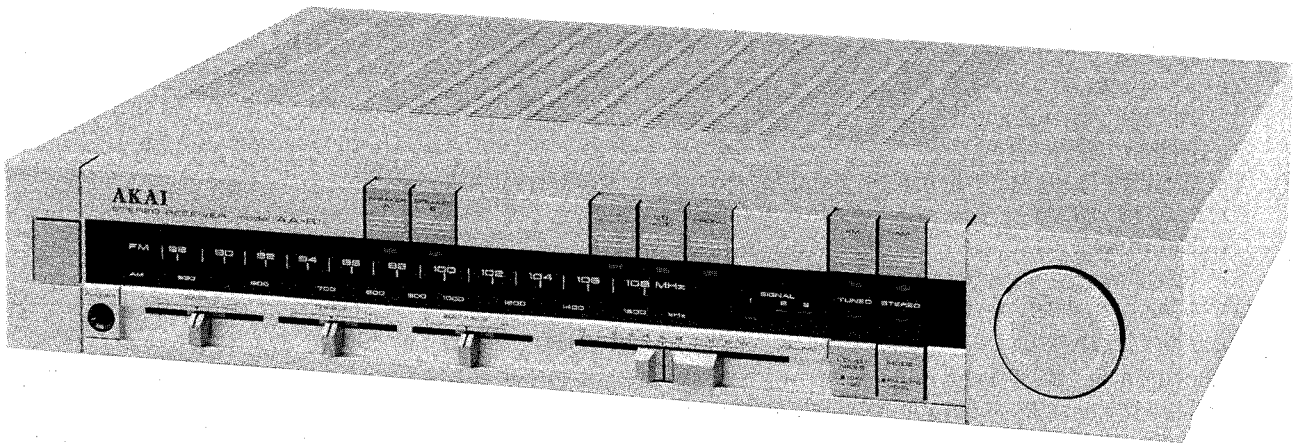


STEREO RECEIVER

MODEL AA-R1/L

ABBREVIATIONS FOR SERVICE MANUAL
MODEL AA-R1/L

ABBREVIATION	EXPLANATION
AC	Alternating Current
AM	Amplitude Modulation
CD	Compact Disc
FM	Frequency Modulation
FREQ	FREQuency
IF	Intermediate Frequency
LW	Long Wave
MOD	MODulation
MW	Midium Wave
OSC	OSCillator
SENS	SENSitivity
SSG	Standard Signal Generator
R	Right
L	Left
SW	SWitch



STEREO RECEIVER

MODEL AA-R1/L

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SECTION 3 SCHEMATIC DIAGRAM 29

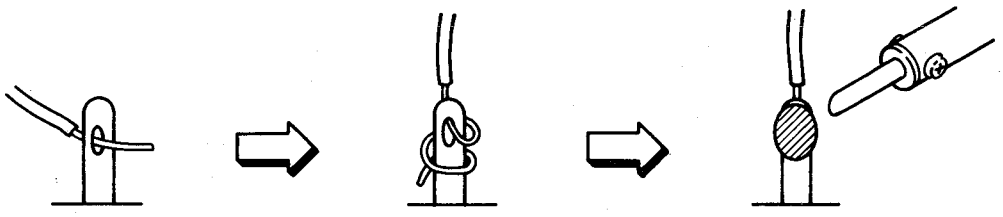
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.

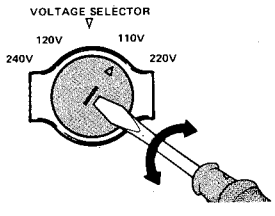


6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

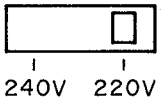
VOLTAGE CONVERSION

Models for Canada, USA, and W. GER are not equipped with this facility. Each machine is preset at the factory according to destination, but some machines can be set to 110V, 120V, 220V or 240V as required. If your machine's voltage can be converted:

1. Disconnect the power cord.
2. Turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



AA-R1(U.E.S models)



AA-R1L

SECTION 1

SERVICE MANUAL

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I . SPECIFICATION

FM TUNER SECTION

TUNING FREQUENCY RANGE	87.5 MHz to 108.0 MHz
USABLE SENSITIVITY (IHF)	12.7 dBf (30 dB)
QUIETING SENSITIVITY (IHF) (S/N=50 dB) MONO/STEREO	19.2 dBf/40.2 dBf
CAPTURE RATIO	2.0 dB
SELECTIVITY (IHF)	60 dB
IMAGE REJECTION	50 dB
IF REJECTION	80 dB
SPURIOUS REJECTION	80 dB
AM SUPPRESSION	50 dB
S/N (IHF)	70 dB (Mono)/62 dB (Stereo)
HARMONIC DISTORTION	0.2% (Mono)/0.4% (Stereo)
STEREO SEPARATION	45 dB (1 kHz)
FREQUENCY RESPONSE	30 Hz to 15 kHz±1.0 dB

AM (MW FOR AA-R1L) TUNER SECTION

TUNING FREQUENCY RANGE	525 kHz to 1,605 kHz
USABLE SENSITIVITY (IHF)	300 μV/m
SELECTIVITY (IHF)	30 dB
IMAGE REJECTION	40 dB
IF REJECTION	35 dB
S/N	40 dB
ANTENNA	Loop antenna

LW (ONLY FOR AA-R1L) TUNER SECTION

TUNING FREQUENCY RANGE	160 kHz to 340 kHz
USABLE SENSITIVITY (IHF)	800 μV/m
SELECTIVITY (IHF)	40 dB
IMAGE REJECTION	35 dB
IF REJECTION	35 dB
S/N	35 dB
ANTENNA	Loop antenna

AMPLIFIER SECTION

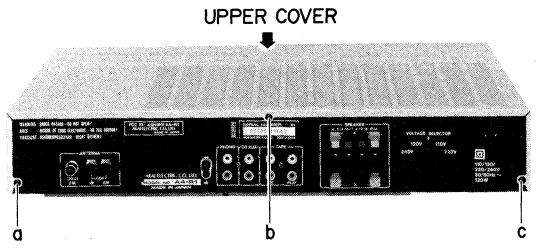
RATED OUTPUT POWER (2 channels driven)	8 ohms	4 ohms
20 Hz TO 20 kHz	22W x 2/0.2%	25W x 2/0.2%
1 kHz	25W x 2/0.2%	27W x 2/0.2%
MUSIC POWER	45W x 2/0.2%	
POWER BANDWIDTH (IHF)	10 Hz to 30 kHz/8 ohms (T.H.D. 0.3%)	
S/N		
PHONO	70 dB	
AUX/TAPE	90 dB	
CHANNEL SEPARATION (IHF)		
PHONO	50 dB (1 kHz)	
AUX/TAPE	50 dB (1 kHz)	
DAMPING FACTOR (1 kHz, 8 ohms)	27	
INPUT SENSITIVITY/IMPEDANCE		
PHONO	2.5 mV/47 kohms	
AUX/TAPE	150 mV/47 kohms	
OUTPUT LEVEL IMPEDANCE		
TAPE REC	150 mV/2 kohms	
FREQUENCY RESPONSE		
PHONO (RIAA)	30 Hz to 15 kHz, ±1.0 dB	
AUX/TAPE	5 Hz to 80 kHz, –3 dB	
TONE CONTROL		
BASS	±8 dB/100 Hz	
TREBLE	±8 dB/10 kHz	
LOUDNESS CONTROL		
VOLUME (set at –30 dB position)	+10 dB/100 Hz	
	+6 dB/10 kHz	
SPEAKERS	4 to 16 ohms (A or B)	
	8 to 16 ohms (A and B)	
POWER REQUIREMENTS	120V, 60 Hz for USA & Canada	
	220V, 50 Hz for Europe except UK	
	240V, 50 Hz for UK & Australia	
	110/120/220/240V, 50/60 Hz switchable for other countries	
POWER CONSUMPTION	150W (A, C Model), 120W (U Model)	
DIMENSIONS	440 (W) x 78 (H) x 276 (D) mm	
	(17.3 x 3.1 x 10.9 inches)	
WEIGHT	4.9 kg (10.8 lbs)	

* For improvement purposes, speecifications and design are subject to change without notice.

II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

1



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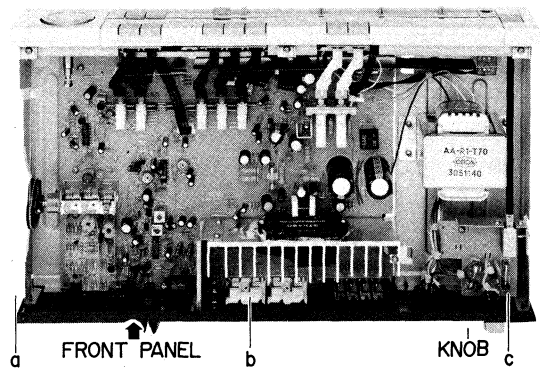

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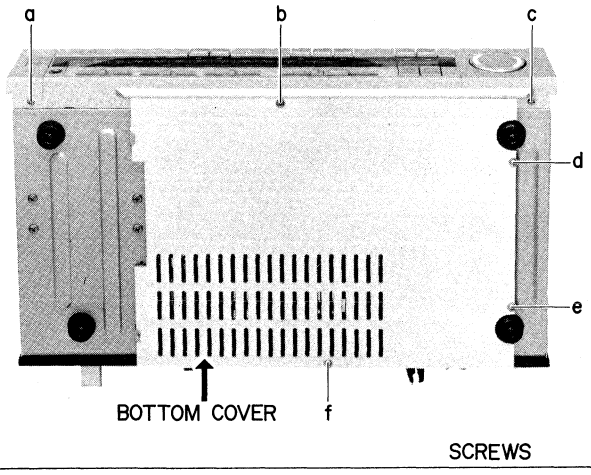

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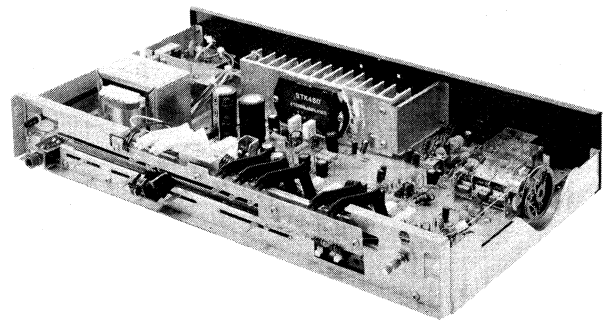


III. CONTROLS

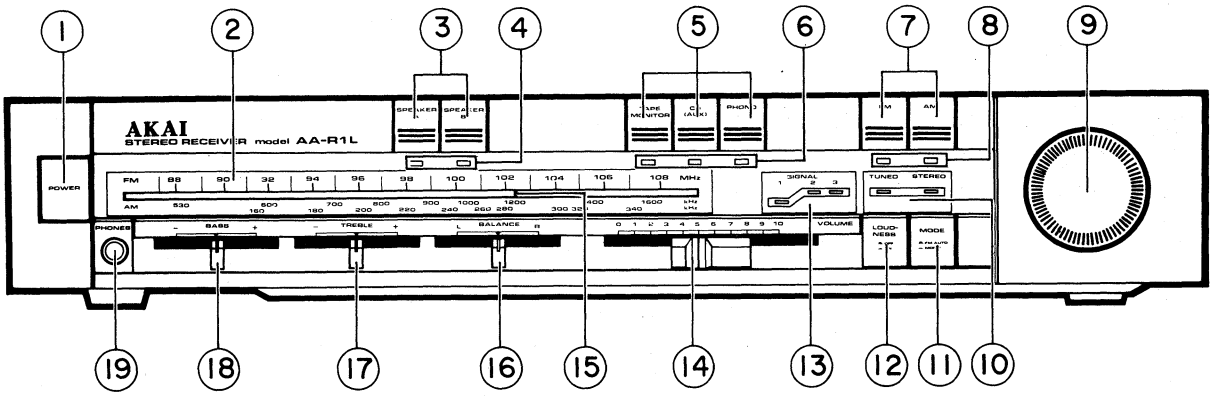


Fig. 3-1

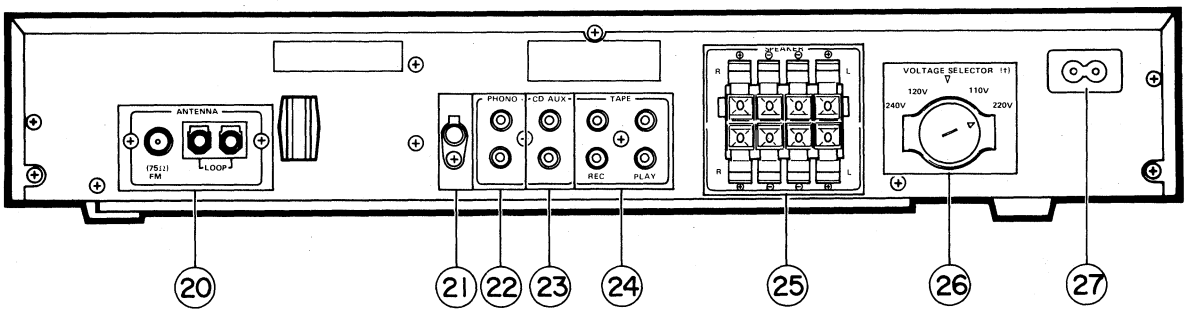


Fig. 3-2

1. POWER SWITCH
2. FM/AM FREQUENCY SCALE
3. SPEAKER SELECTORS
4. SPEAKER INDICATORS
5. INPUT SOURCE SELECTORS
6. INPUT SOURCE INDICATORS
7. BAND SELECTORS
8. BAND INDICATORS
9. TUNING CONTROL
10. TUNING/FM STEREO INDICATOR
11. FM MODE SELECTOR
12. LOUDNESS SWITCH
13. SIGNAL INDICATORS
14. VOLUME CONTROL
15. DIAL POINTER
16. BALANCE CONTROL
17. TREBLE CONTROL
18. BASS CONTROL
19. HEADPHONE JACK
20. ANTENNA TERMINALS
21. GROUND TERMINAL ($\perp$)
22. PHONO JACKS
23. CD (AUX) JACKS
24. TAPE JACKS
25. SPEAKER TERMINALS
26. VOLTAGE SELECTOR (U,E,S MODELS and AA-RIL)
27. AC INLET (U,E,S MODELS AND AA-R1L)

IV. PRINCIPAL PARTS LOCATION

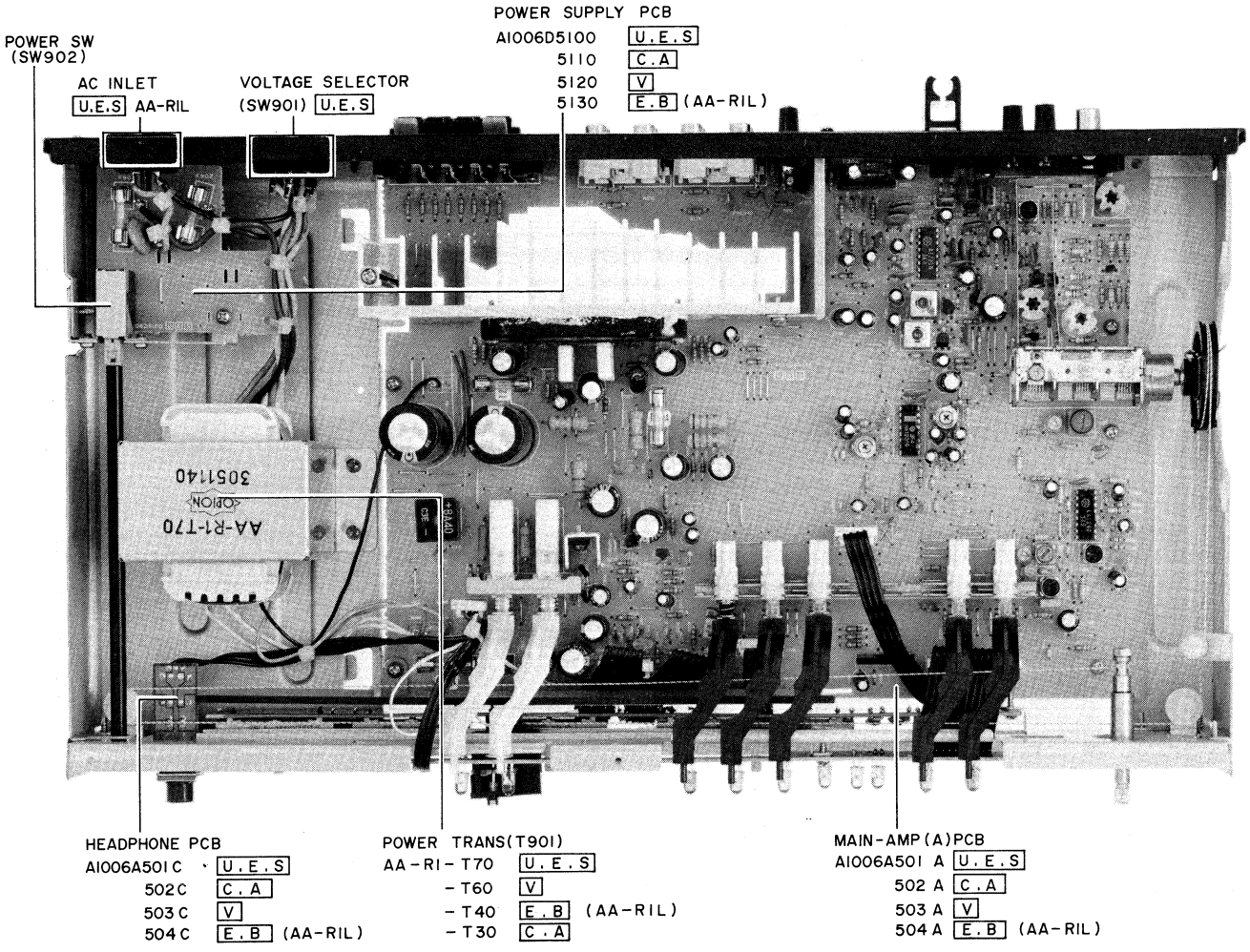


Fig. 4-1 Top View

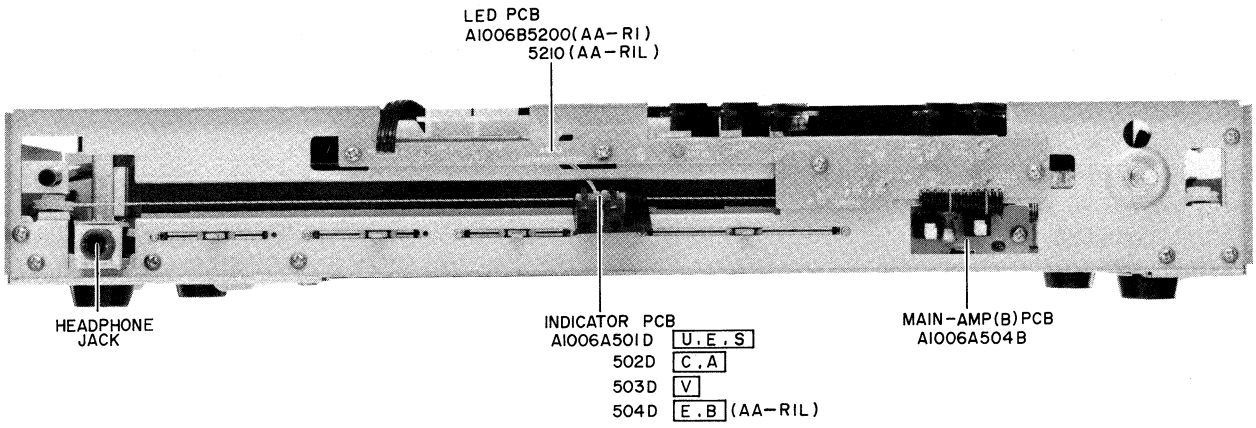


Fig. 4-2 Front View

V. ELECTRICAL ADJUSTMENT

5-1. THE INSTRUMENT CONNECTIONS FOR TUNER ADJUSTMENT

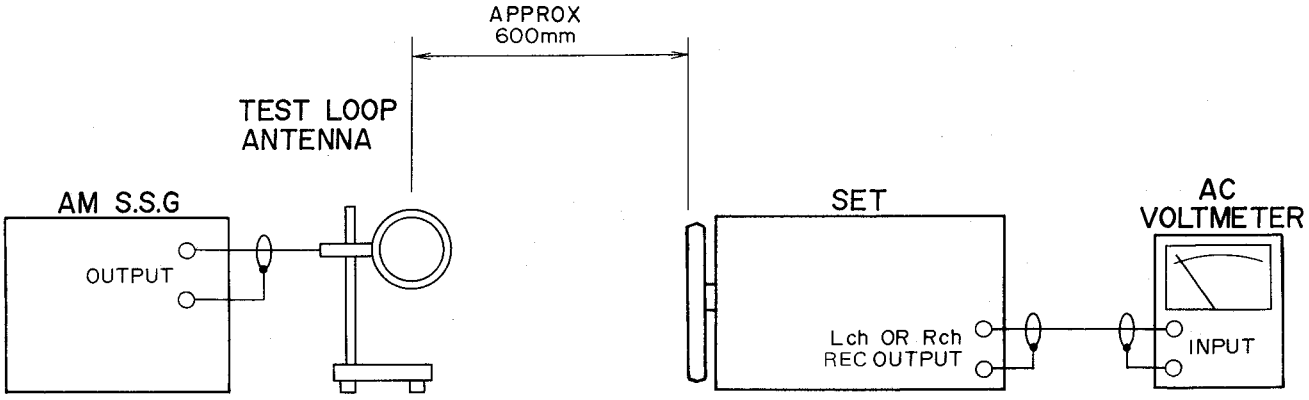


Fig. 5-1 Instrument Connections for AM (MW, LW) Section Adjustment

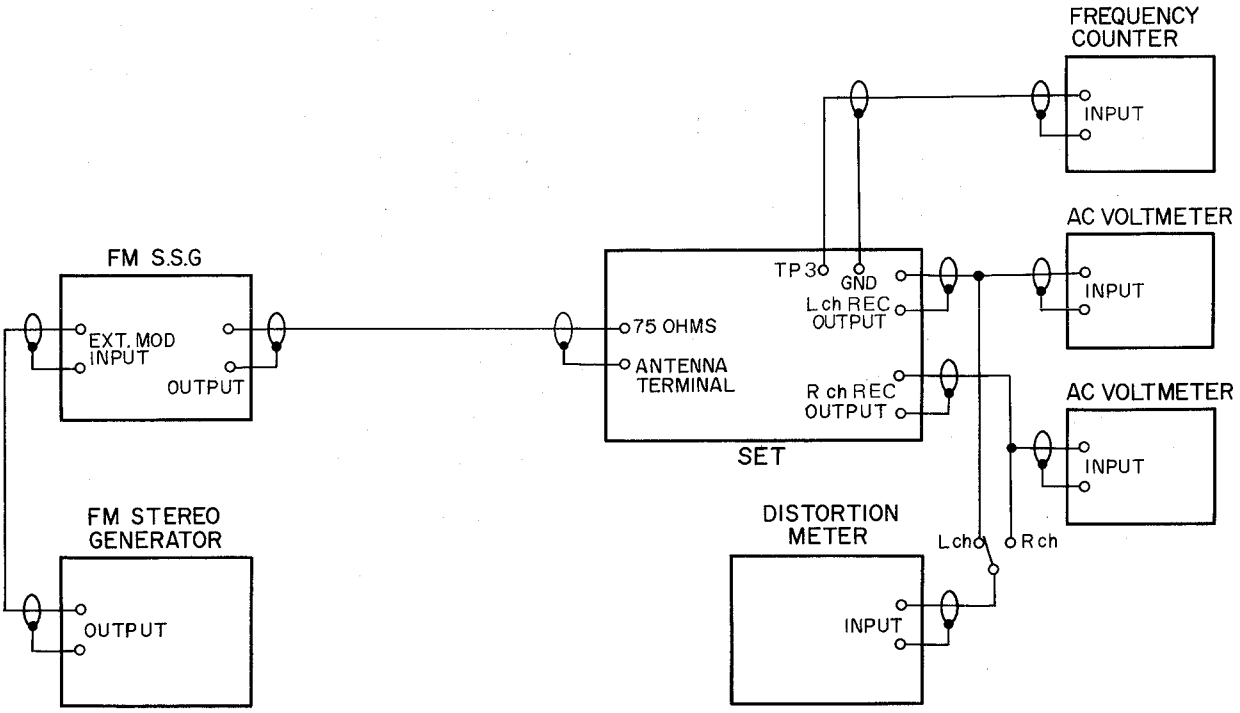


Fig. 5-2 Instrument Connections for FM Section Adjustment

5-2. AA-R1/L MAIN-AMP (A) P.C BOARD ADJUSTMENT POINTS

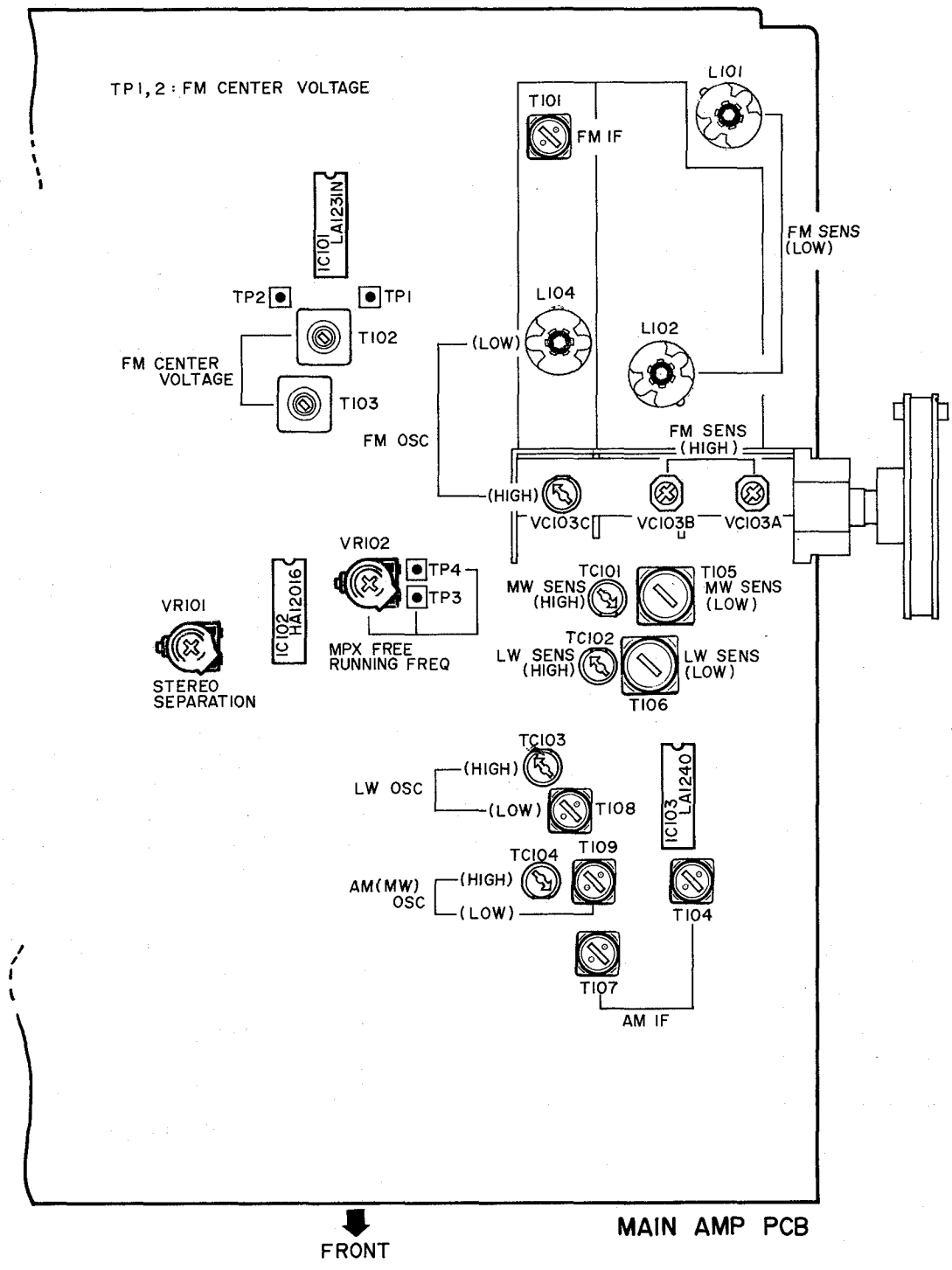


Fig. 5-3

5-3. MW ADJUSTMENT (Refer to Figs. 5-1 & 5-3)

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	AM (MW) OSC (Low)	T109	Maximum output Minimum Distortion	Selector to AM (MW) 530kHz, 76dB input Dial Pointer to 530kHz
2	AM (MW) OSC (High)	TC104	Maximum output Minimum Distortion	1600kHz, 76dB input Dial pointer to 1600kHz
3	Repeat Step 1 & 2			
4	MW Low Rnage Sensitivity	T105	Less than 60dB input from SSG	600kHz input Tune the signal (600kHz) Less than 10% Distortion Factor
5	MW High Range Sensitivity	TC101	Less than 60dB input from SSG	1400kHz input Tune the signal (1400kHz) Less than 10% Distortion Factor
6	Repeat Step 4 & 5			
7	MW Mid Range Sensitivity (Confirmation)		Less than 60dB input from SSG	1000kHz input Tune the signal (1000kHz) Less than 10% Distortion Factor
8	Signal Meter Sensitivity (Confirmation)		Signal Indicator LEDs are lit	1000kHz (MW), 74dB input Tune the signal (1000kHz)
9	AM IF	T107 T104	Maximum output Minimum Distortion	1000kHz, 76dB input Tune the signal (1000kHz)
10	Output Voltage (Confirmation)		−12±3dBm	1000kHz, 76dB input Tune the signal (1000kHz)
11	Distortion Factor (Confirmation)		Less than 1.5%	1000kHz, 76dB input Tune the signal (1000kHz)

NOTE

Set the internal modulation signal generator to 30%, 1 kHz of each.

5-4. LW ADJUSTMENT (Refer to Figs. 5-1 & 5-3)

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	LW OSC (Low)	T108	Maximum output Minimum Distortion	Selector to LW 160kHz, 76dB input Dial pointer to 160kHz
2	LW OSC (High)	TC103	Maximum output Minimum Distortion	340kHz, 76dB input Dial pointer to 340 kHz
3	Repeat Step 1 & 2			
4	LW Low Range Sensitivity	T106	Less than 65dB input from SSG	160kHz input Tune the signal (160kHz) Less than 10% Distortion Factor
5	LW High Range Sensitivity	TC102	Less than 65dB input from SSG	300kHz input Tune the signal (300kHz) Less than 10% Distortion Factor
6	Repeat Step 4 & 5			
7	LW Mid Range Sensitivity (Confirmation)		Less than 65dB input from SSG	200kHz input Tune the signal (200kHz) Less than 10% Distortion Factor
8	Signal Meter Sensitivity (Confirmation)		Signal indicator LEDs are lit	200kHz (LW) 74dB input Tune the signal (200kHz)
9	Output Voltage (Confirmation)		−14 ±3dBm	200kHz (LW) 74dB input Tune the signal (200kHz)
10	Distortion Factor (Confirmation)		Less than 3%	200kHz (LW) 74dB input Tune the signal (200kHz)

NOTES

1. Set the internal modulation signal generator to 30%, 1 kHz of each.
2. This Adjustments are AA-RIL only.

5-5. FM ADJUSTMENT

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	FM OSC (Low)	L104	Maximum Output	Selector to FM 88MHz, 60 dB, Mono input Dial Pointer to 88MHz
2	FM OSC (High)	VC103C	Maximum Output	108MHz, 60 dB, Mono input Dial Pointer to 108MHz
3	Repeat Step 1 & 2			
4	FM IF	T101	Maximum Output	98MHz, 60 dB Mono input Dial Pointer to 98MHz
5	Low Range Sensitivity	L101 L102	Less than 6dB input from SSG	Mode Switch to "ON" 88MHz Mono input Tune the signal (88MHz) 3% Distortion Factor
6	High Range Sensitivity	VC 103A VC 103B	Less than 6dB input from SSG	106MHz Mono input Tune the signal (106MHz) 3% Distortion Factor
7	Mid. Range Sensitivity (Confirmation)		Less than 6dB input from SSG	98MHz Mono input Tune the signal (98MHz) 3% Distortion Factor
8	FM Center Voltage	T102 T103	Centered Tuning Meter Indication	Connect a Center Tuning Meter between TP1 and TP2 (See Note 1) Tune only noise without interference from broadcasting
9	Mono Distortion Factor (Confirmation)		Less than 0.5%	98MHz, 60 dB input Tune the signal (98MHz)
10	MPX Free Running Frequency	VR102	76kHz ±50Hz	Mode switch "OFF" Connect a frequency counter between TP3 and TP4
11	Stereo Separation	VR101	More than 35dB	98MHz, 60dB, Stereo input L-ch (R-ch) input Tune the signal (98MHz) Minimum output of R-ch (L-ch)
12	Output Voltage (Confirmation)		–2.8 ±3dBm	98MHz, 60 dB Mono input Tune the signal (98MHz)

NOTES

1. The center tuning meter such as the ones used on models AA-R20, 30, 40, 50 & AT-2400, 2600 can be used for this adjustment. If they are not available, use a digital meter (DC VOLTAGE, RANGE 20V) instead, and adjust T102 & T103 so that it indicates 0V at the same condition.
2. Set the internal modulation signal generator to 100% (75kHz div.), 1kHz of each.

VI. CLASSIFICATION OF VARIOUS P.C BOARDS

6-1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

MODEL AA-R1

P.C Board Title	P.C Board Number	Remarks
MAIN-AMP (A) P.C BOARD	A1006A501A	U, E, S
	A1006A502A	C , A
	A1006A503A	V
MAIN-AMP (B) P.C BOARD	A1006A504B	
LED P.C BOARD	A1006B5200	
POWER SUPPLY P.C BOARD	A1006D5100	U, E, S
	A1006D5110	C, A
	A1006D5120	V
HEADPHON P.C BOARD	A1006A501C	U, E, S
	A1006A502C	C, A
	A1006A503C	V
INDICATOR P.C BOARD	A1006A501D	U, E, S
	A1006A502D	C, A
	A1006A503D	V

MODEL AA-R1L

P.C Board Title	P.C Board Number	Remarks
MAIN-AMP (A) P.C BOARD	A1006A504A	E, B
MAIN-AMP (B) P.C BOARD	A1006A504B	E, B
LED P.C BOARD	A1006A5210	E, B
POWER SUPPLY P.C BOARD	A1006A5130	E, B
HEADPHONE P.C BOARD	A1006A504C	E, B
INDICATOR P.C BOARD	A1006A504D	E, B

6-2. COMPOSITION OF VARIOUS P.C BOARDS

1) AA-R1 MAIN AMP (A) PC BOARD A1006A501 [U, E, S] , A1006A502A [C, A] , A1066A503A [C, A]

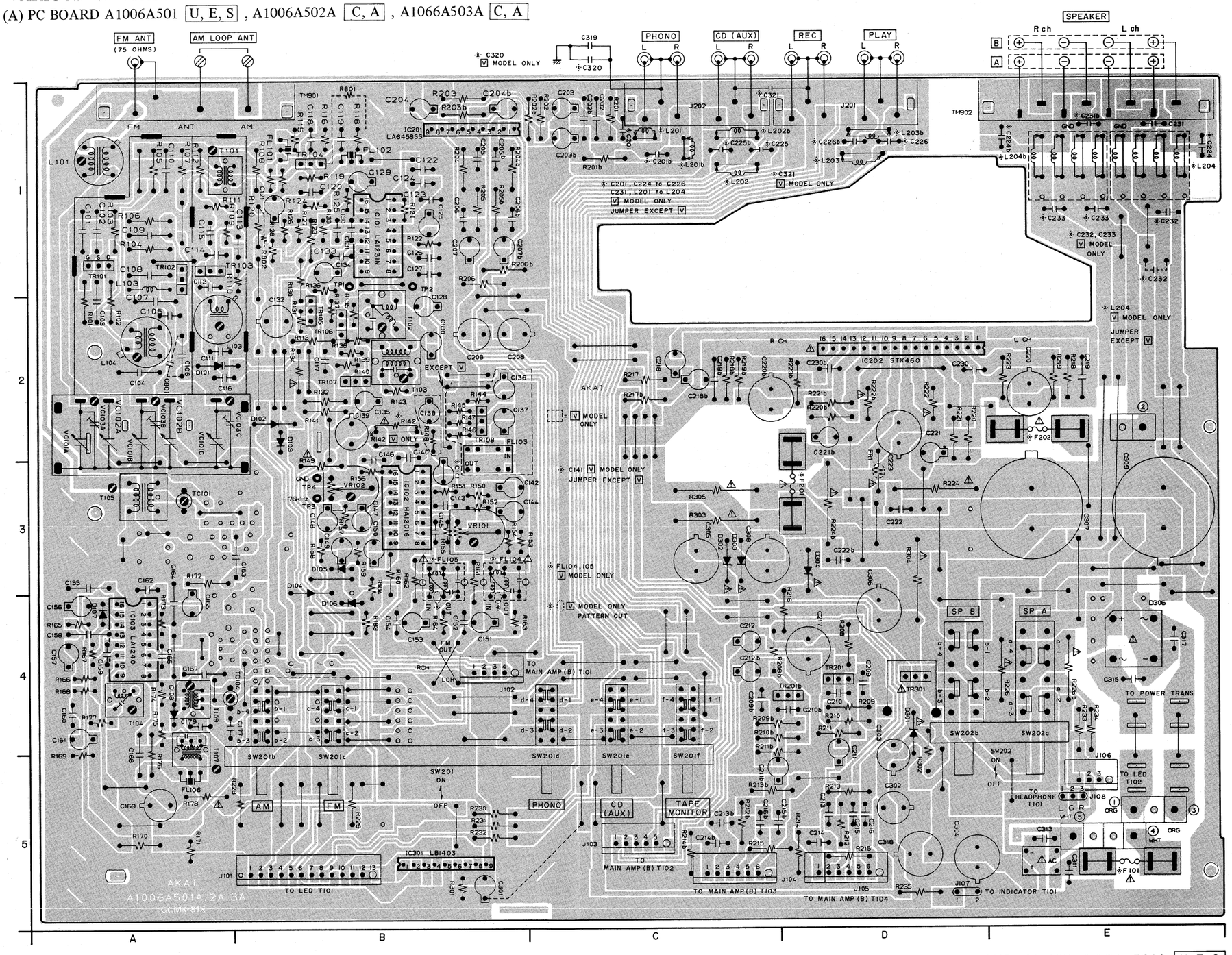
LOCATION OF COMPONENTS

IC
IC101,201.....1B
IC102.....3B
IC103.....4A
IC202.....2D
IC301.....5B

TR
TR101 to 103...1A
TR104.....1B
TR105 to 108...2B
TR201,201b,
301.....4D

TERMINAL
J101.....5B
J102.....4B
J103,104.....5C
J105,107.....5D
J106.....4E
J108.....5E
J201(PLAY/REC)
J202(PHONO/AUX)
TM902(SPEAKER JACKS)
①,③,④,⑤.....5E
②.....2E

Adjustment Item	Point
FM IF	T101
FM CENTER VOLTAGE	T102 T103
AM IF	T104 T107
MW LOW SENS	T105
MW OSC(LOW)	T109
MW HIGH SENS	TC101
MW OSC(HIGH)	TC104
FM LOW SENS	L101 L102
FM OSC(LOW)	L104
FM HIGH SENS	VC103A VC103B
FM OSC(HIGH)	VC103C
STEREO SEPARATION	VR101
MPX FREE RUNNING FREQ	VR201
FM CENTER VOLTAGE	TP1,2
FM FREE RUNNING 76kHz	TP3,4



2SC930
2SC536NP
2SC2240

2SD612K

2SC2999

2SC2603

2SK161

TR101 --------- 2SK161(Y)
TR102 --------- 2SC2999(C,D)
TR103,104 ----- 2SC930(E,F)
TR105 to 107 --- 2SC536NP(E,F,G)
TR108 --------- 2SC2603
TR201 --------- 2SC2240(GR,BL)
TR301 --------- 2SD612K(D,E,F)

※	F101	F201	F202
U,E,S	T0.4A	T2.5A	T2.5A
C,A	0.5A 125V	3.15A 125V	3.15A 125V
V	T0.4A	T2.5A	T2.5A

MAIN AMP (A) PCB A1006A501A [U,E,S]
502A [C,A]
503A [V]

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

2) AA-R1L MAIN AMP (A) P.C BOARD A1006A504 [E, B]

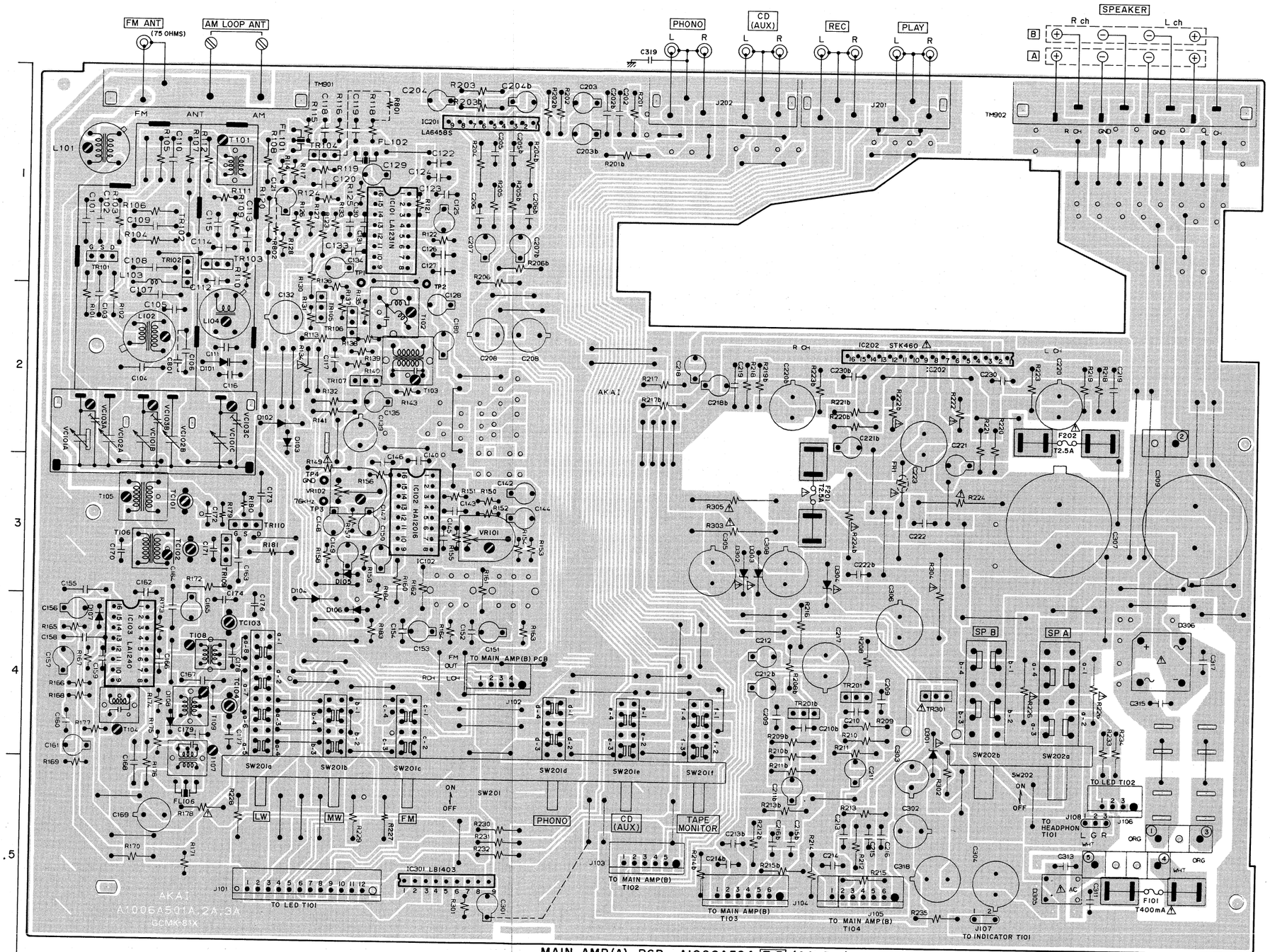
LOCATION OF COMPONENTS

IC
IC101,201.....1B
IC102.....3B
IC103.....4A
IC202.....2D
IC301.....5B

TR
TR101 to 103...1A
TR104.....1B
TR105 to 107...2B
TR109.....3A
TR110.....3B
TR201,201b,
301.....4D

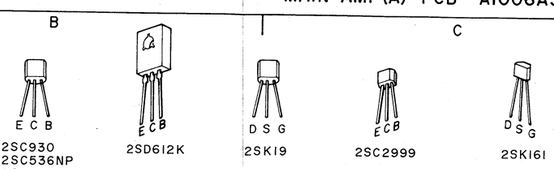
TERMINAL
J101.....5B
J102.....4B
J103,104.....5C
J105,107.....5D
J106.....4E
J108.....5E
J201(REC/PLAY)
J202(PHONO/AUX)
TM902(SPEAKER
JACKS)

Adjustment Item	Point
FM IF	T101
FM CENTER VOLTAGE	T102 T103
AM IF	T104 T107
MW LOW SENS	T105
LW LOW SENS	T106
LW OSC(LOW)	T108
MW OSC(LOW)	T109
MW HIGH SENS	TC101
LW HIGH SENS	TC102
LW OSC(HIGH)	TC103
MW OSC(HIGH)	TC104
FM LOW SENS	L101 L102
FM OSC(LOW)	L104
FM HIGH SENS	VC103A VC103B
FM OSC(HIGH)	VC103C
STEREO SEPARATION	VR101
MPX FREE RUNNING FREQ	VR102
FM CENTER VOLTAGE	TP1,2
FM FREE RUNNING 76kHz	TP3,4



MAIN AMP(A) PCB A1006A504 [E,B] (AA-R1L)

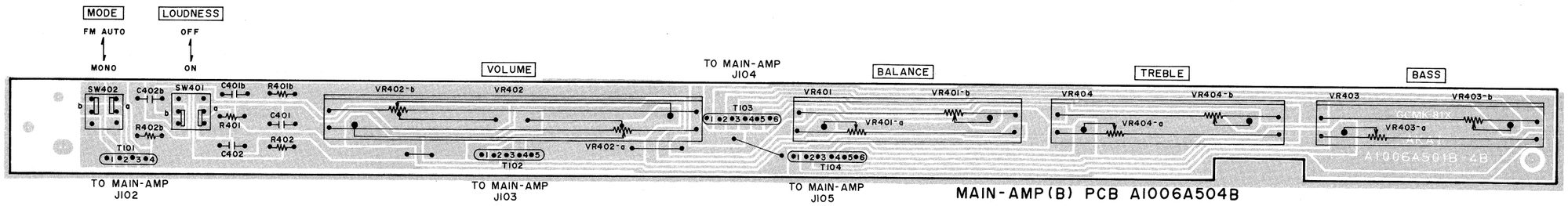
TR101 ------- 2SK161(Y)
TR102 ------- 2SC2999(C,D)
TR103,104 ---- 2SC930(E,F)
TR105 to 107,109 -- 2SC536NP(E,F,G)
TR110 ------- 2SK19(Y)
TR201 ------- 2SC2240(GR,BL)
TR301 ------- 2SD612K(D,E,F)

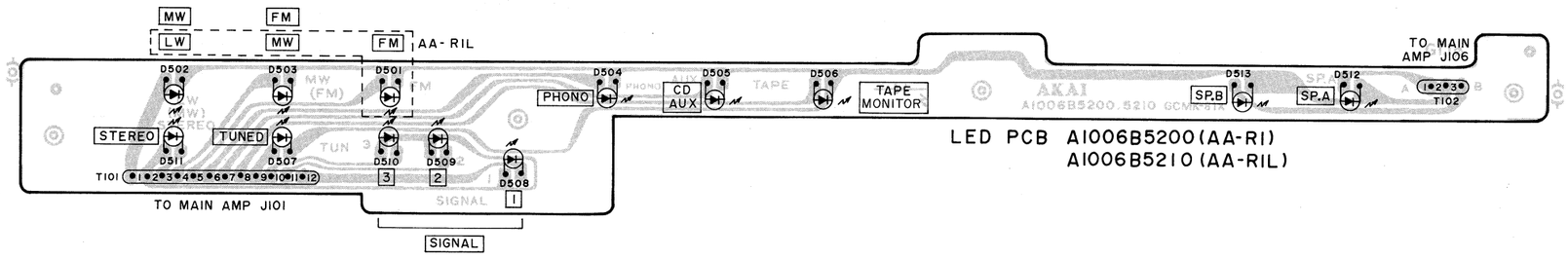


WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

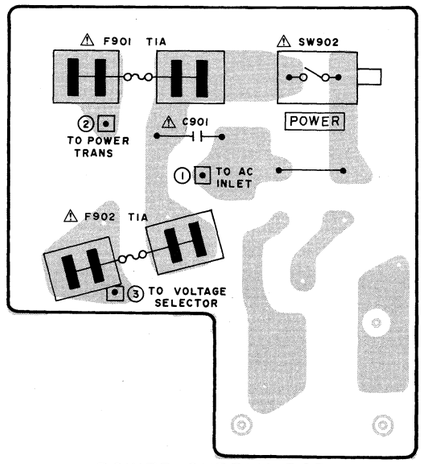
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

3) MAIN AMP (B) P.C BOARD A1006A504B, LED P.C BOARD A1006B5200 (AA-R1), A1006B5210 (AA-R／L)

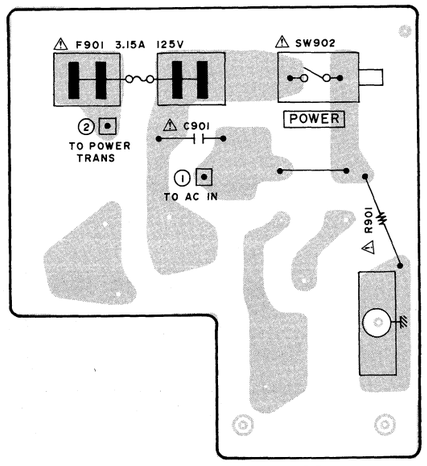




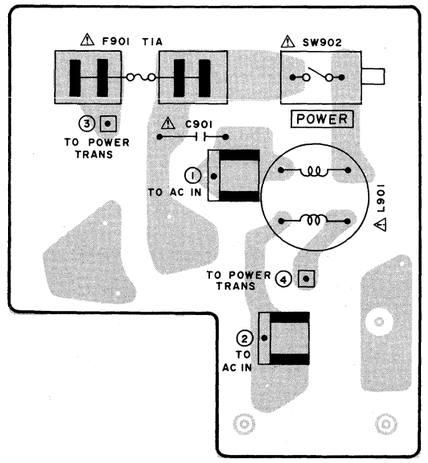
4) POWER SUPPLY P.C BOARD A1006D5100 [U, E, S] , A1006D5110 [C, A] , A1006D5120 [V], A1006D5130 [E, B] (AA-RIL)



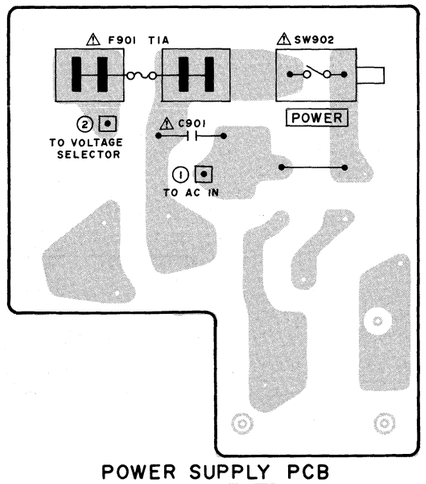
POWER SUPPLY PCB
A1006D5100 [U.E.S]



POWER SUPPLY PCB
A1006D5110 [C.A]

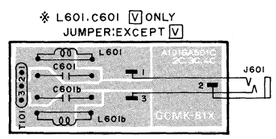


POWER SUPPLY PCB
A1006D5120 [V]



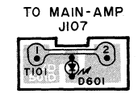
POWER SUPPLY PCB
A1006D5130 [E.B] (AA-RIL)

5) HEADPHONE P.C BOARD
A1006A501C [U, E, S]



HEAD PHONE PCB
A1006A501C [U.E.S]
A1006A502C [C.A]
A1006A503C [V]
A1006A504C [E.B] (AA-RIL)

6) INDICATOR P.C BOARD
A1006A501D [U, E, S]



INDICATOR PCB
A1006A501D [U.E.S]
A1006A502D [C.A]
A1006A503D [V]
A1006A504D [E.B] (AA-RIL)

SECTION 2

PARTS LIST

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RECOMMENDED SPARE PARTS 23
1. MAIN P.C BOARD BLOCK 24
2. LED P.C BOARD BLOCK 25
3. PC POWER SUPPLY BLOCK 25
4. ASSEMBLY BLOCK 26
5. FINAL ASSEMBLY BLOCK 27

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

SECTION 2

PARTS LIST

TABLE OF CONTENTS

RECOMMENDED SPARE PARTS 23
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Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

REF. NO.	PARTS NO.	DESCRIPTION
1	BT-349068	⚠ TRANS POWER AA-R1-T30 (C,A)
2	BT-349069	⚠ TRANS POWER AA-R1-T40 (L-B,L-E)
3	BT-349353	⚠ TRANS POWER AA-R1-T60 (V)
4	BT-349067	⚠ TRANS POWER AA-R1-T70 (U,E,S)
5	EC-337602	C S-FIX H CTZ51E127 4.5-20 (L)
6	EC-337603	C S-FIX H CTZ51F132 5.5-30
7	ED-337391	D LED GL5NG6 GRN
8	ED-321269	D LED GL5PR6 RED
9	ED-345554	D LED SLP455B-01 AMBER
10	ED-200213	D SILICON DBA40C-K15 200/2.6A
11	ED-345555	D SILICON DBB10C 200/1.0A
12	ED-301911	D SILICON H DS448
13	ED-344280	D SILICON H GMA-D1-FY2 F05
14	ED-345552	D VARACTOR 1S553T
15	ED-330218	D ZENER H HZ15L 2
16	ED-346574	D ZENER H HZ22L 2
17	EE-345556	VC AIR CR51J525
18	EF-668474	⚠ FUSE SEMKO T 250V 0.40A (F101) (U,E,S)
19	EF-668474	⚠ FUSE SEMKO T 250V 0.40A (F101) (V,L-B,L-E)
20	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (F901) (U,E,S)
21	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (F901) (V,L-B,L-E)
22	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (F902) (U,E,S)
23	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (F201) (V,L-B,L-E)
24	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (F201) (U,E,S)
25	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (F202) (U,E,S)
26	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (F202) (V,L-B,L-E)
27	EF-309390	⚠ FUSE TSC 125V 0.50A (F101) (C,A)
28	EF-323080	⚠ FUSE TSC 125V 3.15A (F201) (C,A)
29	EF-323080	⚠ FUSE TSC 125V 3.15A (F202) (C,A)
30	EF-323080	⚠ FUSE TSC 125V 3.15A (F901) (C,A)
31	EH-349002	FILTER CE CFM2-450BL 0.450MHz
32	EH-345550	FILTER CE SFE10.7MS2G 10.700MHz (U,C,A,E,S)
33	EH-349057	FILTER CE SFE10.7MS3G 10.700MHz (V,L)
34	EH-349058	FILTER LC LP BL-30MP (V)
35	EI-347119	IC MA12016
36	EI-322248	IC LA1231N
37	EI-293185	IC LA1240
38	EI-336930	IC LA6458SS
39	EI-345551	IC LB1403
40	EI-349060	IC STK-460
41	ER-328520	⚠ R FUSE ERD2FC 1/4W 1000G
42	ES-337902	⚠ SW PUSH SDLD1P 01-1
43	ES-349070	⚠ SW SELECT YKS11-0002 02-4 (SW901) (U,E,S)
44	ES-348463	⚠ SW SLIDE 00120297 01-2 (SW901) (L)
45	ES-349055	SW PUSH ESB-62910 5 THROW (EXCEPT L)
46	ES-349056	SW PUSH ESB-62915 6 THROW (L)
47	ES-346904	SW PUSH ESB-6413 02-2 S
48	ES-343377	SW PUSH SUL232A 2 THROW
49	ET-323232	TR FET 2SK19 Y
50	ET-315410	TR FET 2SK61 Y
51	ET-307195	TR 2SC2240 GR,BL
52	ET-200505	TR 2SC2603 E,F
53	ET-336869	TR 2SC2999 C,D
54	ET-621235	TR 2SC536NP E,F,G
55	ET-618873	TR 2SC930 E,F
56	ET-307193	TR 2SD612K D,E,F
57	EV-337861	R S-FIX H RV8P01 3P 302
58	EV-345784	R S-FIX H RVF8P01 3P 304
59	EV-349063	VR SLIDE 30P2SVOC 254x2
60	EV-349066	VR SLIDE 30P2SVOD 104x2
61	EV-349065	VR SLIDE 60P2SVOH 254x2

1. MAIN P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1K	BA-A1006A040A	PC MAIN BLK AA-R1(K) (U,E,S)
1-1G	BA-A1006A040B	PC MAIN BLK AA-R1(G) (C,A)
1-1V	BA-A1006A040C	PC MAIN BLK AA-R1(V)
1-1L	BA-A1006A040D	PC MAIN BLK AA-R1L(LK)
	PC MAIN (A) BLOCK	
1-IC101A	EI-322248	IC LA1231N
1-IC102A	EI-347119	IC HA12016
1-IC103A	EI-293185	IC LA1240
1-IC201A	EI-336930	IC LA6458SS
1-IC301A	EI-345551	IC LB1403
1-TR101A	ET-315410	TR FET 2SK61 Y
1-TR102A	ET-336869	TR 2SC2999 C,D
1-TR103A	ET-618873	TR 2SC930 E,F
1-TR104A	ET-618873	TR 2SC930 E,F
1-TR105Ato107A	ET-621235	TR 2SC536NP E,F,G
1-TR108A	ET-200505	TR 2SC2603 E,F (V)
1-TR109A	ET-621235	TR 2SC536NP E,F,G (L)
1-TR110A	ET-323232	TR FET 2SK19 Y (L)
1-TR201A	ET-307195	TR 2SC2240 GR,BL
1-TR301A	ET-307193	⚠ TR 2SD612K D,E,F
1-D101A	ED-345552	D VARACTOR 1S553T
1-D102A	ED-301911	D SILICON H DS448
1-D103A	ED-344280	D SILICON H GMA-01-FY2 F05
1-D104A	ED-301911	D SILICON H DS448
1-D105Ato108A	ED-344280	D SILICON H GMA-01-FY2 F05
1-D301Ato303A	ED-330218	⚠ D ZENER H HZ15L 2
1-D304A	ED-346574	⚠ D ZENER H HZ22L 2
1-D305A	ED-345555	⚠ D SILICON DBB10C 200/1.0A
1-D306A	ED-200213	⚠ D SILICON DBA40C-K15 200/2.6A
1-SW201A	ES-349055	SW PUSH ESB-62910 5 THROW (EXCEPT L)
1-SW201AL	ES-349056	SW PUSH ESB-62915 6 THROW (L)
1-SW202A	ES-343377	SW PUSH SUL232A 2 THROW
1-VR101A	EV-345784	R S-FIX H RVF8P01 3P 304
1-VR102A	EV-337861	R S-FIX H RVF8P01 3P 302
1-L101A	EO-345545	COIL VARI 2 TEFI-RF-1 (EXCEPT V)
1-L101VA	EO-349348	COIL VARI 2 TEFI-RF-1A (V)
1-L102A	EO-345546	COIL VARI 2 TEFI-RF-2
1-L103A	EO-336934	COIL FIX 1 LAL03KH 2.20UH M
1-L104A	EO-345547	COIL VARI 2 TEFI-OSC-U
1-L201A	EO-338420	COIL FIX 2 FL12R202E 2.00MH (V)
1-L202A, 203A	EO-345922	COIL FIX 1 LAL03KH 47.00UH K (V)
1-L204A	EO-342936	COIL BALUN (V)
1-T101A	EO-337640	COIL IFT 119AC-15533X 10.7MHz
1-T102A	EO-344425	COIL DET 2 77-1119-01
1-T103A	EO-344433	COIL DET 2 77-1120-01
1-T104A	EO-202216	COIL IFT 7MC-6733C 460.0kHz
1-T105A	EO-337598	COIL VARI 2 25A-1353-01
1-T106A	EO-337599	COIL VARI 2 25A-1354-03 (L)
1-T107A	EO-349001	COIL IFT 7MC-4718N 0.450MHz
1-T108A	EO-345549	COIL OSC2 7NRS-8725N 570UH (L)
1-T109A	EO-345548	COIL OSC 2 7BRS-8724N 120UH
1-FL101UA	EH-345550	FILTER CE SFE10.7MS2G 10.700MHz (U,C,A,E,S)
1-FL101VA	EH-349057	FILTER CE SFE10.7MS3G 10.700MHz (V,L)
1-FL102UA	EH-345550	FILTER CE SFE10.7MS2G 10.700MHz (U,C,A,E,S)
1-FL201VA	EH-349057	FILTER CE SFE10.7MS3G 10.700MHz (V,L)
1-FL103A	EH-349058	FILTER LC LP BL-30MP (V)
1-FL104VA, 105VA	EH-349059	FILTER LC LP 10PD (V)
1-FL106A	EH-349002	FILTER CE CFM2-450BL 0.450MHz
1-J201A, 202A	EJ-336905	PIN J AJC-035-ACB P 4P
1-VC101A	EE-345556	VC AIR CR51J525
1-TC101A	EC-337603	C S-FIX H CTZ51F132 5.5-30
1-TC102A, 103A	EC-337602	C S-FIX H CTZ51E127 4.5-20 (L)
1-TC104A	EC-337603	C S-FIX H CTZ51F132 5.5-30
1-R134A	ER-324184	⚠ R CB H S10 FS RDS 1/4W 121J
1-R142A,149A	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J (V)
1-R178A	ER-327710	⚠ R CB H S10 FS RDS 1/4W 151J
1-R222A	ER-336920	⚠ R CT P F09 PLATE 3W R33K
1-R224A	ER-333015	⚠ R OMF H SNP FS 2W 4R7J
1-R226A	ER-308028	⚠ R OMF H S15 FS 1W 181J
1-R303A	ER-333034	⚠ R OMF H SNP FS 2W 122J
1-R304A	ER-333043	⚠ R OMF H SNP FS 2W 681J
1-R305A	ER-333034	⚠ R OMF H SNP FS 2W 122J
1-FR1A	ER-328520	⚠ R FUSE ERD2FC 1/4W 1000G
1-C106A	EC-335489	C CE H F10 SL 1ROM 50DC (EXCEPT V)
1-C106CA	EC-349347	C CE CGN A 575K 500DC (V)
1-C146A	EC-317623	C STV V F05 500 102J 50DC
1-C176A	EC-334412	C STY V F05 500 161J 50DC (L)
1-C177A	EC-330541	C STY V F05 CQ09S411J 50DC
1-C307A,309A	EC-35065	C EC V CUT 472M 35DC
1-TM901A	EJ-344423	TERMINAL W/SCREW YKD31-0133 P 2P
1-TM902A	EJ-349061	TERMINAL PUSH YKD21-0025 P 8P
	PC MAIN (B) BLOCK	
1-SW401B, 402B	ES-346904	SW PUSH ESB-6413 02-2 S
1-VR401B	EV-349063	VR LSIDE 30P2SVOC 254x2
1-VR402B	EV-349065	VR SLIDE 60P2SVOH 254x2
1-VR403B, 404B	EV-349066	VR SLIDE 30P2SVOD 104x2
	PC HEADPHONE BLOCK	
1J601C	EJ-343380	PHONE J 3P HLJ0541-040 6.3
1-L601C	EO-336934	COIL FIX 1 LAL03KH 2.20UH M
	PC IND BLOCK	
1-D601D	ED-345554	D LED SLP455B-01 AMBER
1-F101U	EF-668474	⚠ FUSE SEMKO T 250V 0.40A (U,E,S)
1-F101C	EF-309390	⚠ FUSE TSC 125V 0.50A (C,A)
1-F101V	EF-668474	⚠ FUSE SEMKO T 250V 0.40A (V,L-B,L-E)
1-F201U	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (U,E,S)
1-F201C	EF-323080	⚠ FUSE TSC 125V 3.15A (C,A)
1-F201V	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (V,L-B,L-E)
1-F202U	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (U,E,S)

REF. NO.	PARTS NO.	DESCRIPTION
1-F202C	EF-323080	⚠ FUSE TSC 125V 3.15A (C,A)
1-F202V	EF-623125	⚠ FUSE SEMKO T 250V 2.50A (V,L-B,L-E)

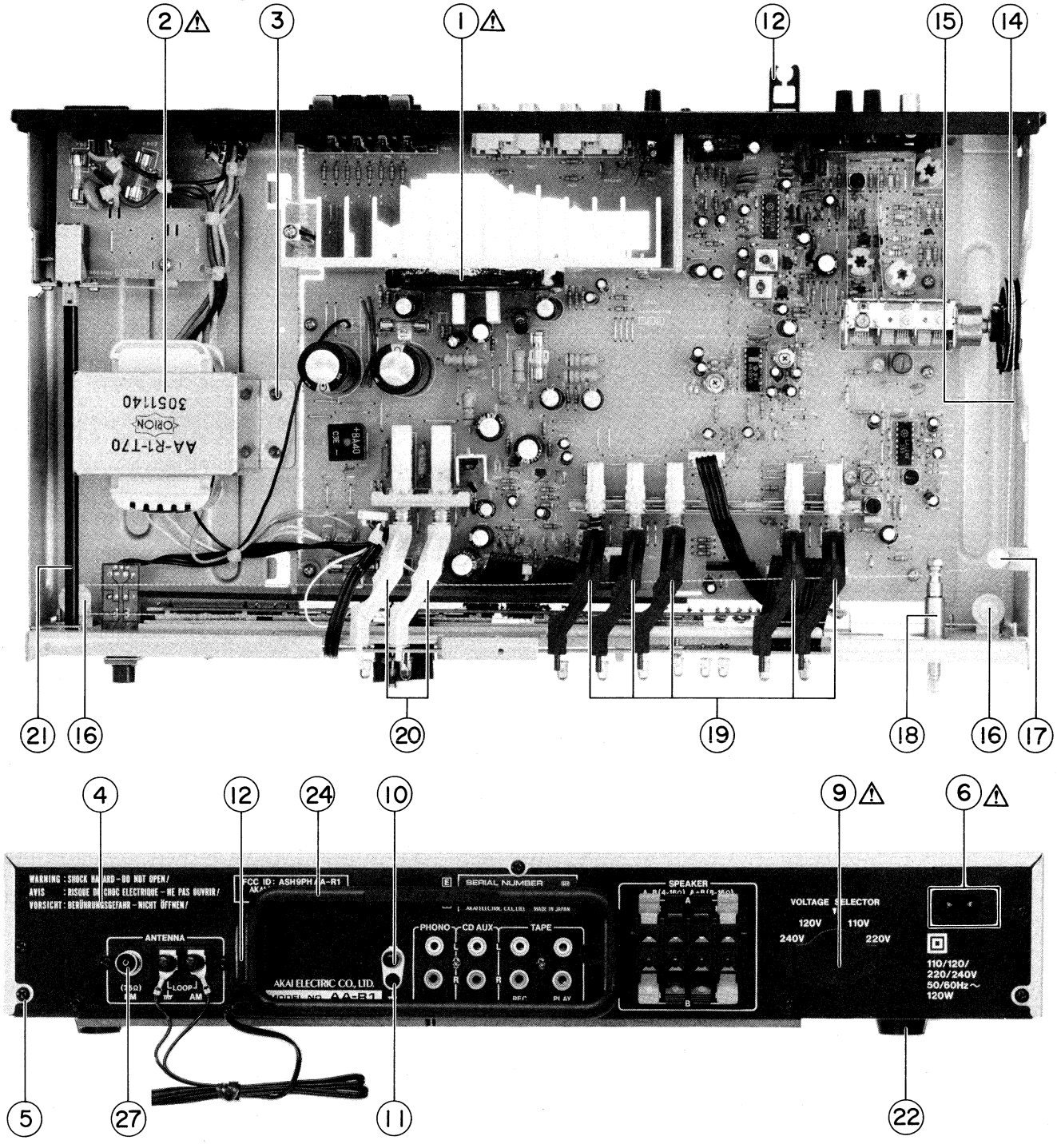
2. LED P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-D501to505	ED-337391	D LED GL5NG6 GRN (L)
2-D506	ED-321269	D LED GL5PR6 RED
2-D507to510	ED-337391	D LED LG5NG6 GRN
2-D511	ED-321269	D LED GL5PR6 RED
2-D512,513	ED-337391	D LED GL5NG6 GRN

3. PC POWER SUPPLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
3-SW902	ES-337902	⚠ SW PUSH SDLD1P 01-1
3-C901U	EC-338577	⚠ C CE V F 472M 400AC (U,E,V,S,B)
3-C901C	EC-314688	⚠ C CE V FZ 103P 125C (C,A)
3-L901V	EO-338409	⚠ COIL LF FKOB160MH02 250UH (V)
3-R901C	ER-672816	⚠ R CB H RD 1/2W 225J (C,A)
3-F901U	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (U,E,S)
3-F901C	EF-323080	⚠ FUSE TSC 125V 3.15A (C,A)
3-F901V	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (V,L-E,L-B)
3-F902U	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (U,E,S)

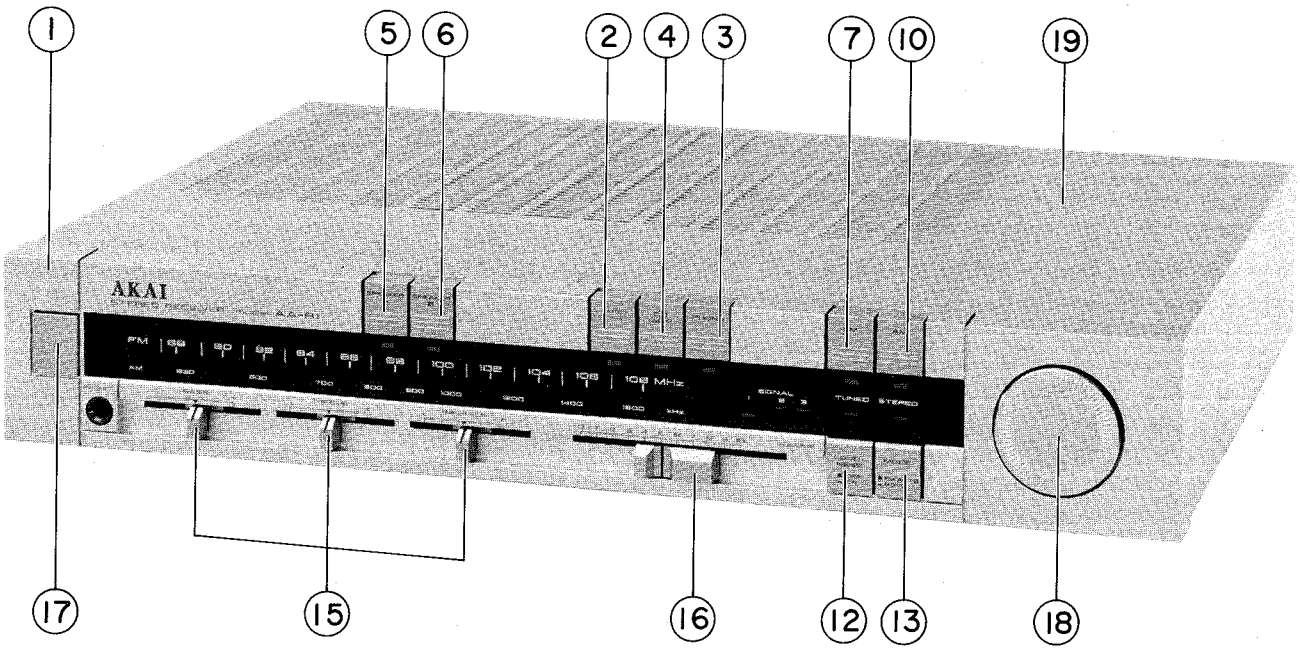
ASSEMBLY BLOCK



4. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-1	EI-349060	⚠ IC STK-460 (IC202)
4-2U	BT-349067	⚠ TRANS POWER AA-R1-T70 (U,E,S)
4-2C	BT-349068	⚠ TRANS POWER AA-R1-T30 (C,A)
4-2L	BT-349069	⚠ TRANS POWER AA-R1-T40 (L-B,L-E)
4-2V	BT-349353	⚠ TRANS POWER AA-R1-T60 (V)
4-3	ZS-301398	ST BID40x08STL CMT
4-4U	SP-346838A	PANEL RELAR AA-R1 (U,E,S)
4-4C	SP-346838B	PANEL REAR AA-R1 (C,A)
4-4V	SP-346838C	PANEL REAR AA-R1 (V)
4-4L	SP-346838D	PANEL REAR AA-R1L (E,B)
4-5	ZS-308846	T2BR30x08STL BZN PROJECTION
4-6	EJ-301513	⚠ SOCKET INLET S-I6453 E 2P (U,E,S,L)
4-7UX	EW-306152	⚠ AC CORD 2 CORES KP-700A/KS-15 U/T (U)
4-7CX	EW-343363	⚠ AC CORD 2 CORES KP-8, SPT-2 105C UC (C)
4-7AX	EW-305691	⚠ AC CORD 2 CORES KP-8, SPT-1 UC (A)
4-7EX	EW-315767	⚠ AC CORD 2 CORES KP-419C/KS-15 EV (E)

FINAL ASSEMBLY BLOCK



5. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
		PANEL FRONT BLOCK
5-1	BC-A1006A070A	PANEL FRONT BLK AA-R1
5-1P	BC-A1006A070B	PANEL FRONT BLK AA-R1-P
5-1L	BC-A1006A070C	PANEL FRONT BLK AA-R1L
5-1LP	BC-A1006A070D	PANEL FRONT BLK AA-R1L-P
5-1S	BC-A1006A070E	PANEL FRONT BLK AA-R1-S
5-1LS	BC-A1006A070F	PANEL FRONT BLK AA-R1L-S
5-2	SK-346846A	KNOB PUSH (A-1) TAPE MONITOR
5-2P	SK-346846K	KNOB PUSH (A-1)-P TAPE MONITOR
5-3	SK-346846B	KNOB PUSH (A-2) PHONO
5-3P	SK-346846L	KNOB PUSH (A-2)-P PHONO
5-4	SK-346846C	KNOB PUSH (A-3) CD/AUX
5-4P	SK-346846M	KNOB PUSH (A-3)-P CD/AUX
5-5	SK-346846D	KNOB PUSH (A-4) SPEAKE A
5-5P	SK-346846N	KNOB PUSH (A-4)-P SPEAKER A
5-6	SK-346846E	KNOB PUSH (A-5) SPEAKER B
5-6P	SK-346846P	KNOB PUSH (A-5)-P SPEAKER B
5-7	SK-346846F	KNOB PUSH (A-6) FM
5-7P	SK-346846Q	KNOB PUSH (A-6)-P FM
5-8x	SK-346846G	KNOB PUSH (A-7) MW (L)
5-8PX	SK-346846R	KNOB PUSH (A-7)-P MW (L)
5-9x	SK-346846H	KNOB PUSH (A-8) LW (L)
5-9PX	SK-346846S	KNOB PUSH (A-8)-P LW (L)
5-10	SK-346846J	KNOB PUSH (A-9) AM
5-10P	SK-346846T	KNOB PUSH (A-9—-P AM
5-11x	ZG-341458	SP PUSH MODE KNOB
5-12	SK-346845A	KNOB PUSH (B-1) LOUDNESS
5-12S	SK-346845C	KNOB PUSH (B-1)-S LOUDNESS
5-13	SK-346845B	KNOB PUSH (B-2) MODE
5-13S	SK-346845D	KNOB PUSH (B-2)-S MODE
5-14x	ZG-349213	SP PUSH KNOB
		FINAL ASSEMBLY BLOCK
5-15	SK-346854	KNOB SLIDE (A)
5-15S	SK-346854B	KNOB SLIDE (A)-S
5-16	SK-B346855	KNOB SLIDE (B) PART
5-16S	SK-B346855B	KNOB SLIDE (B)-S PART
5-17	SK-343017C	KNOB POWER (2)
5-17P	SK-343017D	KNOB POWER (2)-P
5-18	SK-345419	KNOB TUNING
5-18P	SK-345419B	KNOB TUNING-P
5-19	BC-346840A	COVER UPPER
5-19P	BC-346840B	COVER UPPER-P

REF. NO.	PARTS NO.	DESCRIPTION
4-7SX	EW-322401	⚠ AC CORD 2 CORES KP-560/KS-15 S (S)
4-7BX	EW-322400	⚠ AC CORD 2 CORES KS-15/GTBS-2F B (B)
4-7VX	EW-336923	⚠ AC CORD 2 CORES KP-419C, LTCE-2F EV (V)
4-8CX	EZ-631945	STRAIN RELIEF SR-4N-4 (C)
4-8AX	EZ-345815	CORD STOPPER CM-22A (A)
4-8VX	EZ-345816	CORD STOPPER CM-22B (V)
4-9U	ES-349070	⚠ SW SELECT YKS11-0002 02-4 (U,E,S)(SW901)
4-9L	ES-348463	⚠ SW SLIDE 00120297 01-2 (L)(SW901)
4-10	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P (TM903)
4-11	ZS-463353	T2BR30x08STL RNI
4-12	SZ-332739	HOLDER ANTENNA
4-13x	EJ-343362	⚠ SOCKET OUTLET S2T732T174 JUC 2x2P (C,A)
4-14	TA-322250	DIAL WHEEL ASSY
4-15	TA-201961	DIAL STRING TK-1064 (BLACK) D0.5
4-16	MZ-307170	PULLEY
4-17	MR-308836	PULLEY
4-18	MI-346849	SHAFT TUNING ASSY
4-19	MH-345381A	JOINT PUSH (A)
4-20	MH-345381B	JOINT PUSH (B)
4-21	MH-345432	JOINT
4-22	SA-202118	FOOT
4-23x	ZS-516205	T2BR30x08STL CMT PW080
4-24	EE-337976	ANT LOOP LA-200A
4-25x	EE-315329	ANT DIPOLE SAE-010
4-26x	ZW-305013	RV POP32 (A)
4-27	EJ-315331	SOCKET COAX M UX-0014 (U,C,A,S)

INDEX

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BA-A1006A040A	1-1K	EH-349059	1-FL104VA	EW-343363	4-7CX				
BA-A1006A040B	1-1G	EI-293185	1-IC103A	EZ-345815	4-8AX				
BA-A1006A040C	1-1V	EI-322248	1-IC101A	EZ-345816	4-8VX				
BA-A1006A040D	1-1L	EI-336930	1-IC201A	EZ-631945	4-8CX				
BC-A1006A070A	5-1	EI-345551	1-IC301A	MH-345381A	4-19				
BC-A1006A070B	5-1P	EI-347119	1-IC102A	MH-345381B	4-20				
BC-A1006A070C	5-1L	EI-349060	4-1	MH-345432	4-21				
BC-A1006A070D	5-1LP	EJ-301513	4-6	MI-346849	4-18				
BC-A1006A070E	5-1S	EJ-315331	4-27	MR-308836	4-17				
BC-A1006A070F	5-1LS	EJ-329610	4-10	MZ-307170	4-16				
BC-346840A	5-19	EJ-336905	1-J201A	SA-202118	4-22				
BC-346840B	5-19P	EJ-336905	1-J202A	SK-B346855	5-16				
BT-349067	4-2U	EJ-343362	4-13x	SK-B346855B	5-16S				
BT-349068	4-2C	EJ-343380	1-J601C	SK-343017C	5-17				
BT-349069	4-2L	EJ-344423	1-TM901A	SK-343017D	5-17P				
BT-349353	4-2V	EJ-349061	1-TM902A	SK-345419	5-18				
EC-314688	3-C901C	EO-202216	1-T104A	SK-345419B	5-18P				
EC-317623	1-C146A	EO-336934	1-L103A	SK-346845A	5-12				
EC-330541	1-C177A	EO-336934	1-L601C	SK-346845A	5-13				
EC-334412	1-C176A	EO-337598	1-T105A	SK-346445C	5-12S				
EC-335489	1-C106A	EO-337599	1-T106A	SK-346845D	5-13S				
EC-337602	1-TC102A	EO-337640	1-T101A	SK-346846A	5-2				
EC-337602	1-TC103A	EO-338409	3-L901V	SK-346846B	5-3				
EC-337603	1-TC101A	EO-338420	1-L201A	SK-346846C	5-4				
EC-337603	1-TC104A	EO-342936	1-L204A	SK-346846D	5-5				
EC-338577	3-C901U	EO-344425	1-T102A	SK-346846E	5-6				
EC-349347	1-C106CA	EO-344433	1-T103A	SK-346846F	5-7				
EC-350765	1-C307A	EO-345545	1-L101A	SK-346846G	5-8x				
EC-350765	1-C309A	EO-345546	1-L102A	SK-346846H	5-9x				
ED-200213	1-D306A	EO-345547	1-L104A	SK-346846J	5-10				
ED-301911	1-D102A	EO-345548	1-T109A	SK-346846K	5-2P				
ED-301911	1-D104A	EO-345549	1-T108A	SK-346846L	5-3P				
ED-321269	2-D506	EO-345922	1-L202A	SK-346846M	5-4P				
ED-321269	2-D511	EO-345922	1-L203A	SK-346846N	5-5P				
ED-330218	1-D303A	EO-349001	1-T107A	SK-346846P	5-6P				
ED-330218	1-D301A	EO-349348	1-L101VA	SK-346846Q	5-7P				
ED-330218	1-D302A	ER308028	1-R226A	SK-346846R	5-8Px				
ED-337391	2-D502	ER-322591	1-R142A	SK-346846S	5-9Px				
ED-337391	2-D503	ER-322591	1-R149A	SK-346846T	5-10P				
ED-337391	2-D504	ER-324184	1-R134A	SK-346854	5-15				
ED-337391	2-D501	ER-327710	1-R178A	SK-346854B	5-15S				
ED-337991	2-D505	ER-328520	1-FR1A	SP-346838A	4-4U				
ED-337391	2-D507	ER-333015	1-R224A	SP-346838B	4-4C				
ED-377391	2-D508	ER-333034	1-R303A	SP-346838C	4-4V				
ED-337391	2-D510	ER-333034	1-R305A	SP-346838D	4-4L				
ED-337391	2-D509	ER-333043	1-R304A	SZ-332739	4-12				
ED-337391	2-D512	ER-336920	1-R222A	TA-201961	4-15				
ED-337391	2-D513	ER-672816	3-R901C	TA-322250	4-14				
ED-344280	1-D103A	ES-337902	3-SW902	ZG-341458	5-11x				
ED-344280	1-D105A	ES-343377	1-SW202A	ZG-349213	5-14x				
ED-344280	1-D106A	ES-346904	1-SW401B	ZS-301398	4-3				
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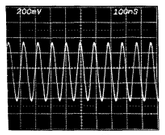
ED-345552	1-D101A	ES-349055	1-SW201A	ZS-516205	4-23x				
ED-345554	1-D601D	ES-349056	1-SW201AL	ZW-505013	4-26x				
ED-345555	1-D305A	ES-349070	4-9U						
ED-346574	1-D304A	ET-200505	1-TR108A						
EE-315329	4-25	ET-307193	1-TR301A						
EE-337976	4-24	ET-307195	1-RT201A						
EE-345556	1-VC101A	ET-315410	1-TR101A						
EF-309390	1-F101C	ET-323232	1-TR110A						
EF-323080	1-F201C	ET-336869	1-TR102A						
EF-323080	1-F202C	ET-618873	1-TR103A						
EF-323080	3-F901C	ET-618873	1-TR104A						
EF-623103	3-F901U	ET-621235	1-TR107A						
EF-623103	3-F902U	ET-621235	1-TR109A						
EF-623103	3-F901V	ET-621235	1-TR105A						
EF-623125	1-F201U	ET-621235	1-TR106A						
EF-623125	1-F201V	EV-337861	1-VR102A						
EF-623125	1-F202U	EV-345784	1-VR101A						
EF-623125	1-F202V	EV-349063	1-VR401B						
EF-668474	1-F101U	EV-349065	1-VR402B						
EF-668474	1-F101V	EV-349066	1-VR403B						
EH-345550	1-FL101UA	EV-349066	1-VR404B						
EH-345550	1-FL102UA	EW-305691	4-7AX						
EH-349002	1-FL106A	EW-306152	4-7UX						
EH-349057	1-FL101VA	EW-315767	4-7EX						
EH-349057	1-FL102VA	EW-322400	4-7BX						
EH-349058	1-FL103A	EW-322401	4-7SX						
EH-349059	1-FL105VA	EW-336923	4-7VX						

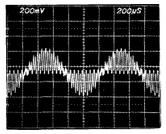
SECTION 3

SCHEMATIC DIAGRAM

1. AA-R1/L BL BLOCK DIAGRAM 30
2. AA-R1 SCHEMATIC DIAGRAM 31
3. AA-R1L SCHEMATIC DIAGRAM 32



IC 101 PIN ① FM STEREO SIGNAL



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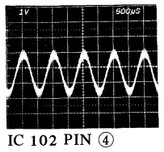

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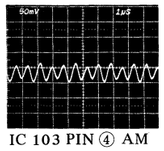

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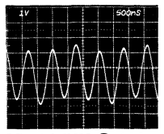

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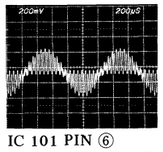

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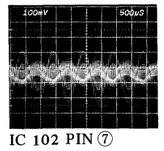

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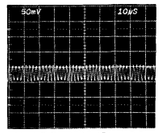

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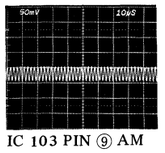

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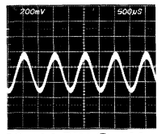

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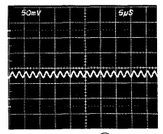

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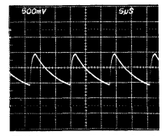
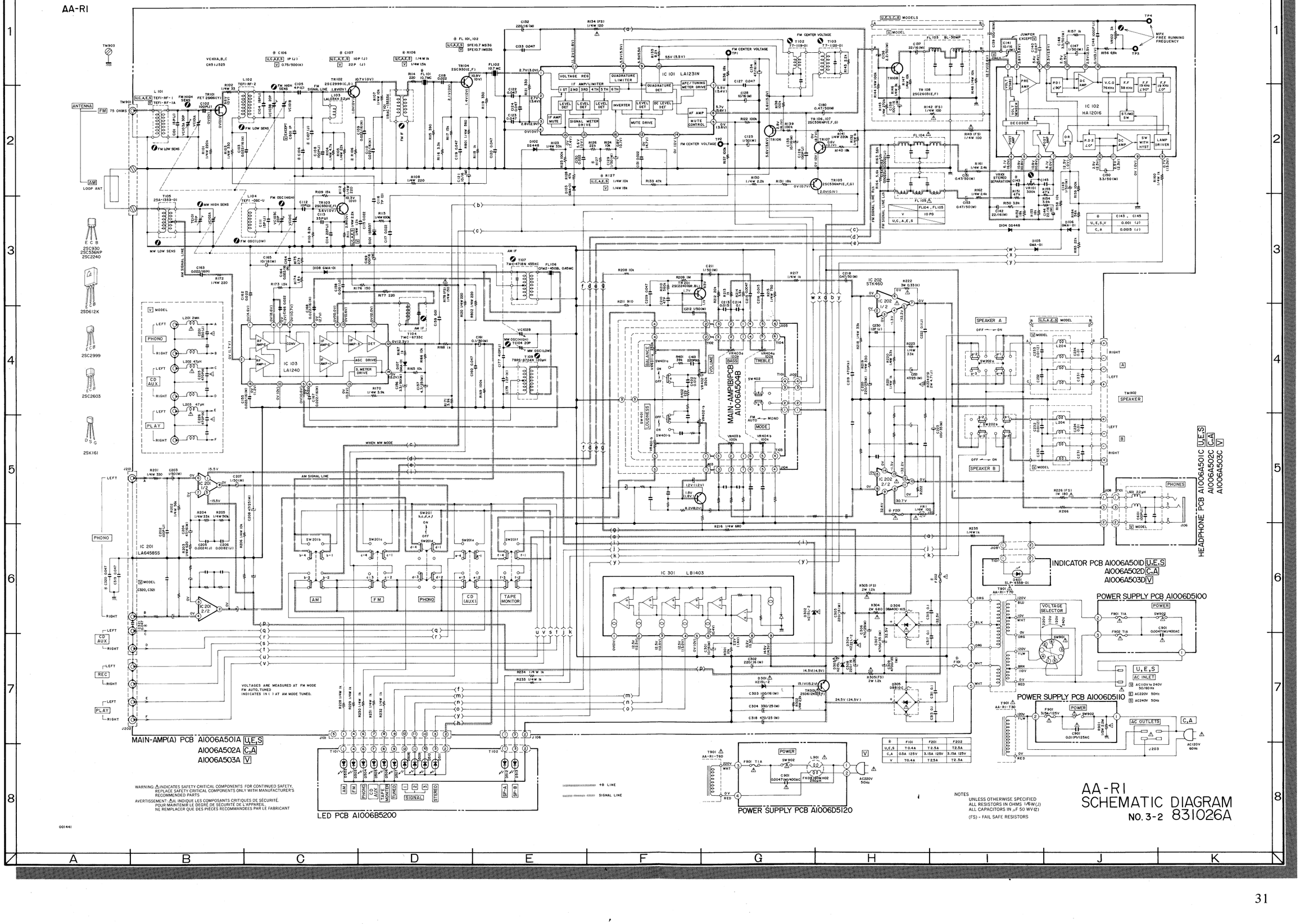


TP3 FM L & R

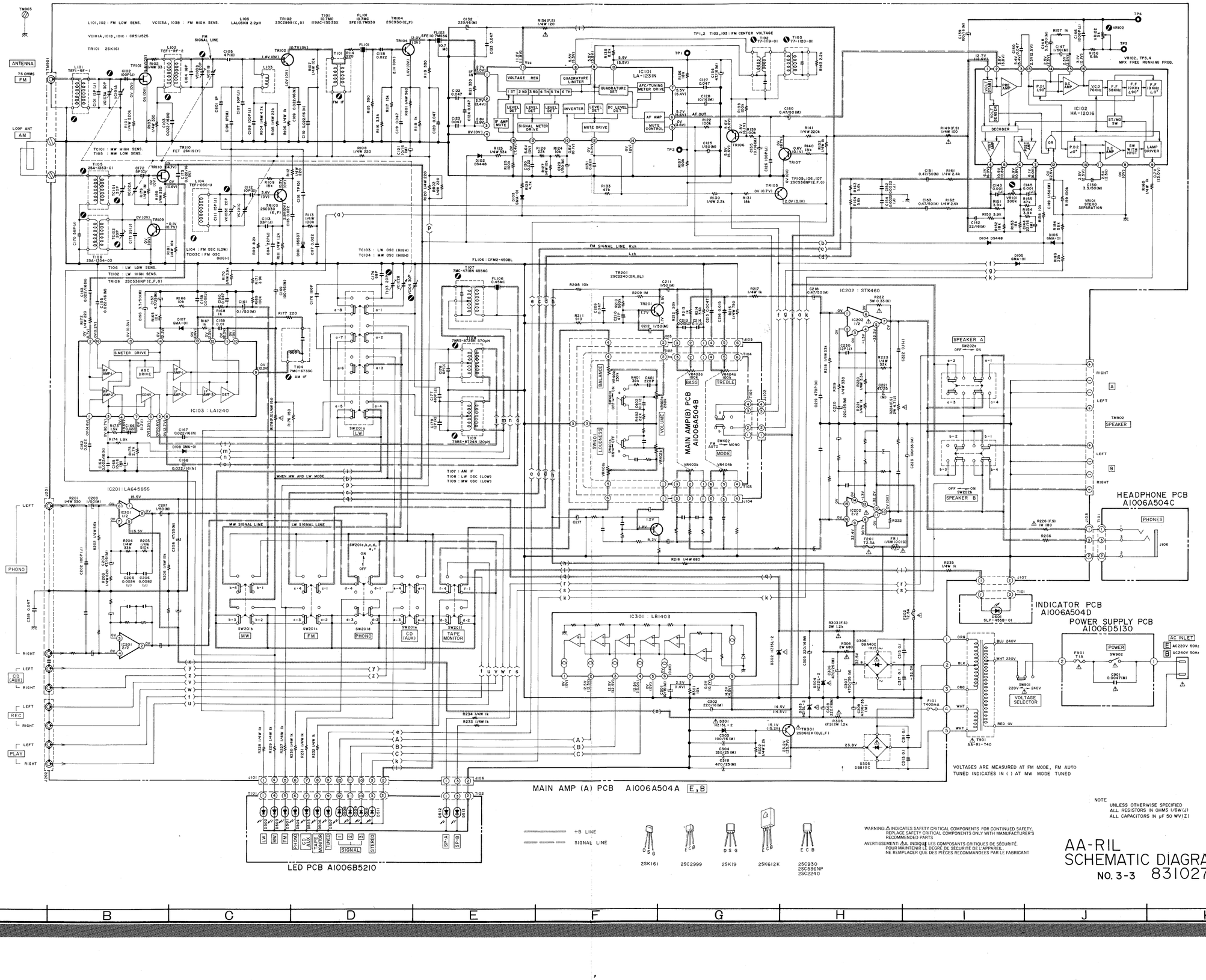
FM ANT
AM ANT
TR101 RF AMP
TR102 MIX AMP
TR103 LOCAL OSC
TR104 AMP
TR105 TUNING "OFF"
TR106, 107 TUNING "OFF"
TR108 AMP
TR110 RF AMP
TR107 MW "ON"
FL101 10.7MHz IF FILTER
FL102 10.7MHz IF FILTER
FL103 FILTER
FL106 0.45MHz IF FILTER
T107 IF COIL
T104 IF FILTER
MW OSC T109
LW OSC T108
MW ANT COIL T105
LW ANT COIL T106
D101
D102
D107
R137
+14V
VCC
GND
IC101 LA1231N
VOLTAGE REG
IF AMP/LIMITER
1st 2nd 3rd 4th 5th 6th
LEVEL DET
IF AMP MUTE
SIGNAL METER DRIVE
QUADRATURE LIMITER
QUADRATURE DET
T102, T103 QUADRATURE DET
AFC/TUNING METER DRIVE
INVERTER
MUTE DRIVE
DC LEVEL DET
AF AMP
MUTE CONTROL
V MODEL ONLY
OTHER MODEL
IC103 LA1240
RFA-2
RFA-1
CONV
IFA-2
IFA-1
IFA-3
DET
RF IN
RF OUT
SUB
AGC DRIVE
SM DRIVE
SW201-a MW
SW201-a LW
SW201-b MW
SW201-a LW
SW402 FM AUTO MONO
VR401 BALANCE
LOUDNESS
VOLUME
AMP
BASS
TREBLE
SW401
VR402
TR201
VR403
VR404
POWER AMP IC202 STK460
IC202 1/2
IC202 2/2
F202
F201
FR1
HEADPHONE JACK
SPEAKER A
SPEAKER B
SW202-a
SW202-b
MAIN AMP (B) PCB
IC201 LA6458SS
+15V
-15V
IC201 1/2
IC201 2/2
RIAA EQ
PHONO
CD AUX
REC
PLAY
SW201-a LW
SW201-b MW
SW201-c FM
SW201-d PHONO
SW201-e CD AUX
SW201-f TAPE MONITOR
SW201 ON OFF
MAIN AMP (A) PCB
IC301 LB1403
LED PCB
MPX FREE RUNNING FREQ 76kHz
TP3
VR102
C140
VOLT STABI
PRE AMP
P.D 1 ∠90°
DC AMP
V.C.O 76kHz
F.F 38kHz
F.F 19kHz ∠90°
F.F 19kHz ∠0°
IC102 HA12016
VOLT SENSER
ST/MO SW
DECODER
POST AMP
OR
P.D 2 ∠0°
SW WITH HYST
LAMP DRIVER
VR101 STEREO SEPARATION
C150
R160
T901
D306
D305
F101
+32.5V
-32.5V
REG
+24V
TR301
+14V
D501 LW
D502 MW
D503 FM
D504 PHONO
D505 CD AUX
D506 TAPE MONITOR
D507 TUNED
D508 SIGNAL 1
D509 SIGNAL 2
D510 SIGNAL 3
D511 STEREO
D512 SP A
D513 SP B

(RECEIVER)
AA-R1/L
BLOCK DIAGRAM
NO.3-1 831025A

AA-RI


IC 101 LA1231N
IC 102 HA12016
IC 103 LA1240
IC 201 LA6458SS
IC 202 STK400
IC 301 LB1403
MAIN-AMP(A) PCB AI006A501A U,E,S
AI006A502A C,A
AI006A503A V
LED PCB AI006B5200
POWER SUPPLY PCB AI006D5120
HEADPHONE PCB AI006A501C U,E,S
AI006A502C C,A
AI006A503C V
INDICATOR PCB AI006A501D U,E,S
AI006A502D C,A
AI006A503D V
POWER SUPPLY PCB AI006D5100
POWER SUPPLY PCB AI006D5110
SPEAKER A
SPEAKER B
SPEAKER
PHONES
AM
FM
PHONO
CD (AUX)
TAPE MONITOR
VOLTAGES ARE MEASURED AT FM MODE FM AUTO, TUNED INDICATES (IN ( ) AT AM MODE TUNED.
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT
001441
+B LINE
SIGNAL LINE
NOTES
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (Z)
(FS) - FAIL SAFE RESISTORS
AA-RI
SCHEMATIC DIAGRAM
NO. 3-2 831026A

AA-RIL



VOLTAGES ARE MEASURED AT FM MODE, FM AUTO
TUNED INDICATES IN ( ) AT MW MODE TUNED

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50 WV(Z)

WARNING ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

AA-RIL SCHEMATIC DIAGRAM

NO. 3-3 831027A